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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/720,548      | 11/24/2003  | Jonathan Richard Thorpe | 450110-04829        | 4570             |

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EXAMINER

CAO, PHUONG THAO

ART UNIT PAPER NUMBER

2164

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                          |  |
|------------------------------|------------------------|--------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b>      |  |
|                              | 10/720,548             | THORPE, JONATHAN RICHARD |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>          |  |
|                              | Phuong-Thao Cao        | 2164                     |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is in response to Amendment filed on 08/02/2006.
2. Claims 1, 4, 6-10, 12 and 13 have been amended, and claims 14-16 have been canceled. Currently, claims 1-13 are pending.
3. Applicant's request that the provisional double patenting rejection of claims 1, 2, 7, 8 and 13 be held in abeyance until the conditions are ripe for a non-provisional double patenting rejection is acknowledged.

### *Double Patenting*

4. Claims 1, 2, 7, 8 and 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 16 and 29-32 of copending Application No. 10/536,580. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 16 and 29-32 of Application No. 10/536,580 contain every element of claims 1, 2, 7, 8 and 13-16 of the instant application and thus anticipate claims 1, 2, 7, 8 and 13 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

*Response to Arguments*

5. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. ("A Self-organizing Semantic Map for Information Retrieval". ACM: 1991) in view of Wolff (US Patent No 5,847,708).

As to claim 1, Lin et al. teach:

“An information retrieval apparatus for searching a set of information items” (see Abstract and [page 266, column 1, paragraph 6]), the apparatus comprising:

“a mapping processor operable to generate data representative of a map of information items from a set of information items, the map providing the information items with respect to positions in an array in accordance with a mutual similarity of the information items, similar information items mapping to similar positions in the array” (see Abstract, [page 264, column 1, paragraph 3], [page 264, column 2] and [page 266, column 1, paragraph 6 and 7] wherein “the semantic map of documents” is equivalent to Applicant’s “data representative of a map of information items”, “grid nodes” is equivalent to Applicant’s “positions in an array”; the disclosure of training process to generate the semantic map of documents implies the inclusion of a mapping processor as illustrated in Applicant’s claim language, and the construction of a self organizing semantic map based on Kohonen’s feature map implies the ordering and visualizing data by similarity which can interpret in other words as similar data mapping to similar positions on the map as illustrated in Applicant’s claim language; also see [page 262, column 2, paragraph 5], [page 263, column 1] and Fig. 1);

“a graphical user interface for displaying a representation of at least some of the information items” (see [page 266, column 1, paragraph 6-7] and Fig. 4a-b wherein semantic map or list of titles in selection window is equivalent to Applicant’s “representation of at least some of the information items”); and

“a user control operable in response to a user input to select an information item” (see [page 266, column 1, paragraph 6-7]).

Lin et al. do not teach “a search processor operable to perform a related search with respect to the user selected information item by identifying, from the map, information items which correspond to positions in the array which are neighbouring positions with respect to the array position corresponding to the user selected information item”.

Wolff teaches “a search processor operable to perform a related search with respect to the user selected information item by identifying, from the map, information items which correspond to positions in the array which are neighbouring positions with respect to the array position corresponding to the user selected information item” (see [column 10, lines 30-45 and 52-60] wherein a search for documents which are similar to the icon when user selects the icon is equivalent to Applicant’s “related search” and similarity metrics of nearby icons, which must be identified to create a search query as described, is equivalent to information items identified from the map as in Applicant’s claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lin et al. by the teaching of Wolff, since Lin et al. and Wolff pursue a system which uses a map as a technique for retrieving and searching for information and adding a feature of perform a related search as disclosed provide users with more flexible and effective way to search for information using the map.

As to claim 2, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Lin et al. as modified teach:

two dimensional map indicates that the number of dimensions  $n$  is two and a position in the map being defined by  $x,y$  co-ordinates as illustrated in Applicant' claim language).

As to claim 5, this claim is rejected based on arguments given above for rejected claim 4 and is similarly rejected including the following:

Lin et al. as modified teach:

“wherein the search processor is operable to perform a related search with respect to the user selected information item by identifying information which correspond to positions in the array which are within a radius of positions from the array position corresponding to the user selected information item” (see [page 266, column 1, paragraph 7] and Fig. 4a-c wherein selecting nodes by drawing a rectangular region of nodes from the map is equivalent to related search as illustrated in Applicant's claim language; also see Wolff, [column 10, lines 40-60] wherein the circle radius can be interpreted as the specificity of the desired search).

As to claim 6, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Lin et al. as modified teach:

“wherein the user control is operable to provide the user with a facility for specifying a number of neighbouring positions in accordance with a relative similarity of information items to be search by the search processor in the related search, with respect to the array position of interest” (see [page 266, column 1, paragraph 7] and Fig. 4a-c wherein the function of selecting nodes by drawing a rectangular region of nodes from the map is equivalent to Applicant's claim



“wherein the search processor is operable to search the set of information items in accordance with a search query and to identifying information item corresponding to the search query, and the mapping processor is operable to generate the map data of information items identified by the search processor as a result of the search on the search query” (see [page 267, column 1, paragraph 2] wherein “providing links and sematic maps to retrieved results of a query” is equivalent to Applicant’s claim language).

As to claim 3, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Lin et al. as modified teach:

“wherein the graphical user interface is operable to display of at least some of the position of the array corresponding to identified information as an n-dimensional display array of display points within a display area” (see [page 266, column 1, paragraph 6] and Fig. 4a wherein two dimensional map is equivalent to Applicant’s “an n-dimensional display array”; also see [page 263, column 1]).

As to claim 4, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Lin et al. as modified teach:

“wherein a number of dimensions n is two, a position in the array being defined by x,y co-ordinates” (see [page 266, column 1, paragraph 6] and Fig. 3-4a wherein the disclosure of a

language and drawing a region of choice including any specific number of neighboring nodes around the node of interest).

As to claim 7, Lin et al. teach:

“A method for searching a set of information items” (see Abstract and [page 267, column 1, paragraph 2]), the method comprising:

“generating data representative of a map of information items from a set of information items, the map providing the information items with respect to positions in an array in accordance with a mutual similarity of the information items, similar information items mapping to similar positions in the array” (see Abstract, [page 264, column 1, paragraph 4], [page 264, column 2] and [page 266, column 1, paragraph 6 and 7] wherein “the semantic map of documents” is equivalent to Applicant’s “data representative of a map of information items”, “grid nodes” is equivalent to Applicant’s “positions in an array”, and the construction of a self organizing sematic map based on Kohonen’s feature map implies the ordering and visualizing data by similarity which can interpret in other words as similar data mapping to similar positions on the map as illustrated in Applicant’s claim language; also see [page 262, column 2, paragraph 5], [page 263, column 1] and Fig. 1);

“displaying a representation of at least some of the information items on a graphical user interface” (see [page 266, column 1, paragraph 6-7] and Fig. 4a-b wherein semantic map or list of titles in selection window is equivalent to Applicant’s “representation of at least some of the information items”); and

“selecting an information item in response to a user input” (see [page 266, column 1, paragraph 7] wherein a node is equivalent to Applicant’s “an information item”).

Lin et al. do not teach “wherein a search processor performs a related search with respect to the user selected information item by identifying, from the map, information items which correspond to positions in the array which are neighbouring positions with respect to the array position corresponding to the user selected information item”.

Wolff teaches “a search processor operable to perform a related search with respect to the user selected information item by identifying, from the map, information items which correspond to positions in the array which are neighbouring positions with respect to the array position corresponding to the user selected information item” (see [column 10, lines 30-45 and 52-60] wherein a search for documents which are similar to the icon when user selects the icon is equivalent to Applicant’s “related search” and similarity metrics of nearby icons, which must be identified to create a search query as described, is equivalent to information items identified from the map as in Applicant’s claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lin et al. by the teaching of Wolff, since Lin et al. and Wolff pursue a system which uses a map as a technique for retrieving and searching for information and adding a feature of perform a related search as disclosed provide users with more flexible and effective way to search for information using the map.

As to claim 8, this claim is rejected based on arguments given above for rejected claim 7 and is similarly rejected including the following:

Lin et al. as modified teach:

“searching the information items in accordance with a search query” (see [page 267, column 1, paragraph 2]),

“identifying information items corresponding to the search query” (see [page 267, column 1, paragraph 2] wherein “retrieved results of a query” is equivalent to Applicant’s claim language); and

“the generating comprises generating the map of information items identified by the search processor as a result of the search on the search query” (see [page 267, column 1, paragraph 2] wherein the disclosure of providing semantic maps to retrieved results of a query wherein semantic map equivalent to Applicant’s “the map data of information items” indicates that the map must be generated before providing as disclosed).

As to claim 9, this claim is rejected based on arguments given above for rejected claim 8 and is similarly rejected including the following:

Lin et al. as modified teach:

“displaying a representation of at least some of the positions of the array that correspond to identified information as an n-dimensional display array of display points within a display area” (see [page 266, column 1, paragraph 6] and Fig. 4a wherein two dimensional map is equivalent to Applicant’s “an n-dimensional display array”).

As to claim 10, this claim is rejected based on arguments given above for rejected claim 9 and is similarly rejected including the following:

Lin et al. as modified teach:

“wherein the number of dimensions n is two, and a position in the array is defined by x,y co-ordinates” (see [page 266, column 1, paragraph 6 and Fig. 4a wherein the disclosure of a two dimensional map indicates that the number of dimensions n is two and a position in the map being defined by x,y co-ordinates as illustrated in Applicant’ claim language).

As to claim 11, this claim is rejected based on arguments given above for rejected claim 10 and is similarly rejected including the following:

Lin et al. as modified teach:

“wherein the performing the related search comprises performing a related search with respect to the user selected information item by identifying information which correspond to positions in the array which are within a radius of positions from the array position corresponding to the user selected information item” (see [page 266, column 1, paragraph 7] and Fig. 4a-c wherein selecting nodes by drawing a rectangular region of nodes from the map is equivalent to related search as illustrated in Applicant’s claim language; also see Wolff, [column 10, lines 40-60] wherein the circle radius can be interpreted as the specificity of the desired search).

As to claim 12, this claim is rejected based on arguments given above for rejected claim 11 and is similarly rejected including the following:

Lin et al. teach:

“wherein the user control is operable to provide the user with a facility for specifying the radius of positions in accordance with a relative similarity of information items to be search by the search processor in the related search, with respect to the array position of interest” (see [page 266, column 1, paragraph 7] and Fig. 4a-c wherein the function of selecting nodes by drawing a rectangular region of nodes from the map is equivalent to Applicant’s claim language; the system as disclosed allows a user to select a node (equivalent to Applicant’s “the array position of interest”) to view if the user finds the information of interest, he can go back to the map and search for related information in the neighbor nodes by selecting by drawing a region of choice including any specific number of neighboring nodes -- equivalent to Applicant’s “the radius of positions -- around the selected node).

As to claims 13, these claims are rejected based on arguments given above for rejected claim 7.

8. The prior art made of record and not relied upon is considered pertinent to Applicant’s disclosure.

Sharp (International Publication WO 2002/027508) teaches a method and software for graphical representation of qualitative search results. A coordinate graph is generated to display representations of the data items and represent relationships among the data items.

Mikheev (Publication No US 2002/0055919) teaches a search engine that organizes the search results into clusters of files having logical relationship. The search engine includes a phrase extraction module to analyzes the data for each of the hits in the search results and build an information map and a visualization tool to display the information map to the user.

Peterson et al. (US Patent No 5,819,245) teach a method of organizing data into a graphic format, which allows easy visual interpretation of the data items.

*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong-Thao Cao whose telephone number is (571) 272-2735. The examiner can normally be reached on 8:30 AM - 5:00 PM (Mon - Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PTC

October 11, 2006

  
Primary Examiner  
Art Unit 2167